

WHAT IS CLAIMED IS:

1. An axial tube assembly of a motor, comprising:
  - an axial tube including an axial hole, a stator assembly being adapted to be mounted around said axial tube;
  - 5 an engaging member including a base and a plurality of resilient legs projecting from said base, each said resilient leg having a hook on a distal end thereof, said base of said engaging member being engaged with and thus sealing a bottom end of said axial hole of said axial tube; and
  - a sleeve mounted in said engaging member, a bearing being adapted to 10 be mounted in said sleeve, said sleeve including a base portion;
  - said hook of each said resilient leg of said engaging member being pressed outward to thereby retain said stator assembly in place when said sleeve and said engaging member are received in said axial tube, with said resilient legs of said engaging member together holding said sleeve to thereby 15 allow tight engagement between said sleeve and said bearing.
2. The axial tube assembly of a motor as claimed in claim 1, wherein said axial tube includes a plurality of grooves in an inner periphery delimiting said axial hole, said resilient legs of said engaging member being respectively positioned in said grooves of said axial tube.
- 20 3. The axial tube assembly of a motor as claimed in claim 1, wherein said sleeve further includes a plurality of blocks, each two adjacent resilient legs of said engaging member having a gap therebetween, each said block of

said sleeve being positioned in a respective gap, thereby preventing relative rotation between said sleeve and said engaging member.

4. The axial tube assembly of a motor as claimed in claim 1, wherein said sleeve has an upper end extending to a position adjacent to an end wall of a 5 rotor, preventing entrance of dust via a gap between said end wall of said rotor and said upper end of said sleeve.

5. The axial tube assembly of a motor as claimed in claim 1, wherein said axial tube further includes a plurality of positioning grooves in a bottom end delimiting the axial hole, said base of said engaging member further 10 including a plurality of positioning blocks for engaging with said positioning grooves of said axial tube.

6. The axial tube assembly of a motor as claimed in claim 1, wherein said axial tube further includes a plurality of protrusions on an upper end of an inner periphery delimiting said axial hole for preventing said sleeve from 15 disengaging from said axial tube.

7. The axial tube assembly of a motor as claimed in claim 6, wherein said sleeve includes a plurality of pairs of ribs on an outer periphery thereof, each said protrusion of said axial tube being sandwiched between a respective pair of said ribs of said sleeve.

20 8. The axial tube assembly of a motor as claimed in claim 1, further including a retainer sandwiched between said base portion of said sleeve and said base of said engaging member, thereby positioning a shaft of a rotor that

extends through the bearing.

9. The axial tube assembly of a motor as claimed in claim 8, wherein said base of said engaging member includes a stepped portion on an upper end thereof, and wherein said retainer is positioned on said stepped portion.

5 10. The axial tube assembly of a motor as claimed in claim 1, wherein said bearing is one of an oily bearing, a self-lubricating bearing, a copper bearing, and a sintered bearing.

11. The axial tube assembly of a motor as claimed in claim 1, wherein said bearing further includes a plurality of oil channels in an outer periphery  
10 thereof.